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DIVISION OF
OIL, GAS & MINING

October 20, 1989

Mr. Ralph Sacrison
Barrick Mercur Gold Mine
P.O. Box 838
Tooele, Utah 84074

RE: Bid Specifications for Dump No.2 Ground
Water Monitoring Wells, Dated October 6,
1989

Dear Mr. Sacrison:

I have reviewed the above referenced document. Several questions or issues arose during my review of the technical specifications of Part III, they are:

1. Water for Drilling Fluids (Sections 1.2 & 1.9) - The amount of potable water used by the driller should be reported in the Driller's Report and made available to the Bureau. Also, are the water sources mentioned in Section 1.9 potable drinking water supply?
2. Sand Aggregate in Grout (Section 2.1.5) - any sand aggregate used in the annular grout seal must be inert, to avoid any bias of ground water quality samples. A washed silica sand should meet this criteria.
3. Discharge Pipe (Section 2.1.11) - Schedule 40 pipe will be limited to a depth of approximately 370 feet, assuming a 160 psi bursting strength. This may not be satisfactory for the deep well's pump, which may need to lift water from 500 ft or more. The schedule of pipe needed should be determined after the well's pump depth and specific capacity are known.
4. Soil and Rock Sampling (Section 2.2.3 and 2.2.4) - geologic logs need to be made during sample collection by a trained geologist (see BWPC October 16, 1989 letter, page 8, comment 3).
5. Driller Logs (Section 2.2.6) - driller's logs also need to contain information on: drilling equipment used, drilling fluids, drilling methods and conditions, penetration rate, and circulation losses (see BWPC October 16, 1989 letter, page 8, comment 3).

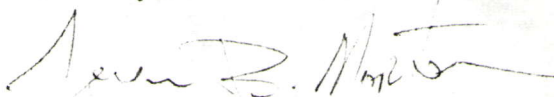
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6. Encountered Mine Workings (Section 2.2.9) - the plugging of a well that has encountered abandoned mine workings should include the use of a mechanical plug or cement basket above the workings. Any well abandonment should conform to the Utah State Engineer's Administrative Rules for Waster Well Drillers, Section 12.
7. Placement of Sand Pack (Section 2.4) - the well's sand pack must extend above the casing screen to protect to protect it from invasion by the overlying bentonite or grout annular seals. Such invasion could hinder or bias ground water sampling.
8. Well development (section 2.7) - well development should continue until the turbidity of the purged water falls below 5 nephelometric turbidity units (NTU, see BWPC October 16, 1989 letter, page 8, comment 6).

As a reminder, the majority of our October 16, 1989 comments on your Proposed Subsurface Drilling and Monitoring Program (Barrick August 28, 1989 Report, Appendix F), remain unresolved. These also must be addressed and incorporated into your drilling and ground water monitoring effort.

If you have any questions, please call me at 538-6146.

Sincerely,



Loren B. Morton
Hydrogeologist
Bureau of Water Pollution Control

cc: Terry VanDell, Dames & Moore
Scott Matheson, Parsons, Behle, & Latimer
Stephen Matern, Tooele County Health Dept.
Wayne Hedberg, DOGM
Glade Shelly, Utah County Health Dept.

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